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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,062	07/30/2001	Donald J. Schremp	10004377-1	2666

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AGILENT TECHNOLOGIES, INC.
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EXAMINER

PADMANABHAN, KARTIC

ART UNIT PAPER NUMBER

1641

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,062

Applicant(s)

SCHREMP, DOANLD J.

Examiner

Kartic Padmanabhan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 and 71-97 is/are pending in the application.
- 4a) Of the above claim(s) 71-97 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-25 and 71-97 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-25, 71-91, and 93-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Earley et al. (WO 94/08759 A1). The reference teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. The reference also teaches the use of lids with the microtiter plate. Further, the microtiter plate is used to perform DNA sequencing reactions. As such, sample with DNA is loaded into the wells of the plate, such that the bottom surface of the well (support) will comprise or contact DNA molecules. However, the reference does not teach the specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

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It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to modify the dimensions of the device of Earley et al. to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

4. Claims 1-25, 71-91, and 93-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pedley (GB 2 197 720 A) in view of Kwasnoski et al. (US Pat. 6,423,948 B1).

Pedley teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. In addition, the reference teaches the immobilization of polynucleotides to the wells of the plate (abstract). However, the reference does not teach the use of a cover, specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

Kwasnoski et al. teach a microtiter plate, wherein the microtiter plate may further comprise a cover.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to use the cover of Kwasnoski et al. with the microtiter plate of Pedley because covers are routinely used in the art on microtiter plates to prevent loss of sample or

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contamination. In addition, it would have also been obvious to modify the dimensions of the modified device of Pedley and Kwasnoski et al. to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). Further, it would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

5. Claims 1-25, 71-91, and 93-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balch (US Pat. 6,083,763) in view of Kwasnoski et al. (US Pat. 6,423,948 B1).

Balch teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. In addition, the reference teaches that the plate may comprise DNA probes. However, the reference does not teach the use of a cover, specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

Kwasnoski et al. teach a microtiter plate, wherein the microtiter plate may further comprise a cover.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to use the cover of Kwasnoski et al. with the microtiter plate of Balch because covers are routinely used in the art on microtiter plates to prevent loss of sample or

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contamination. In addition, it would have also been obvious to modify the dimensions of the modified device of Balch and Kwasnoski et al. to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

6. Claims 1-19, 22-25, 71-89, and 93-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniel (US Pat. 4,919,894). The reference teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. In addition, the reference teaches a cover that sits over the microtiter plate to reduce cross-infection between samples and infection from the air. However, the reference does not teach the specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to modify the dimensions of the device of Daniel to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a

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rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

7. Claims 1-19, 22-25, 71-89, and 93-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matkovich et al. (US Pat. 4,828,386) in view of Kwasnoski et al. (US Pat. 6,423,948 B1).

Matkovich et al. teach a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. According to the reference, membrane inserts can fit within the wells of the microtiter plate or can extend above the well walls. The inserts are removable from the plate. The inserts can be used with standard microtiter plates or the plate can be adapted for specific use with the inserts. However, the reference does not teach the use of a cover, specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

Kwasnoski et al. teach a microtiter plate, wherein the microtiter plate may further comprise a cover.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to use the cover of Kwasnoski et al. with the microtiter plate of Matkovich et al. because covers are routinely used in the art on microtiter plates to prevent loss of sample or contamination. In addition, it would have also been obvious to modify the dimensions of the modified device of Matkovich et al. and Kwasnoski et al. to the specific lengths, widths, and angle sizes required by the present claims. One would have been motivated to do so because

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Matkovich et al. teach that a microtiter plate may be adapted for specific purposes. In addition, it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

8. Claims 1-19, 22-25, 71-89, and 93-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calenoff et al. (US Pat. 4,844,966) in view of Kwasnoski et al. (US Pat. 6,423,948 B1).

Calenoff et al. teach a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. The reference also teaches well inserts. However, the reference does not teach the use of a cover, specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

Kwasnoski et al. teach a microtiter plate, wherein the microtiter plate may further comprise a cover.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to use the cover of Kwasnoski et al. with the microtiter plate of Calenoff et al. because covers are routinely used in the art on microtiter plates to prevent loss of sample or contamination. In addition, it would have also been obvious to modify the dimensions of the modified device of Calenoff et al. and Kwasnoski et al. to the specific lengths, widths, and angle

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sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

9. Claims 1-19, 22-25, 71-89, and 93-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Provonchee (US Pat. 4,701,754) in view of Kwasnoski et al. (US Pat. 6,423,948 B1).

Provonchee teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. The reference also teaches that the wells do not necessarily have to form part of an integral unit, but may be independently removable from a supporting rack. The configuration of the wells in either case is preferably an array of one or more rows. However, the reference does not teach the use of a cover, specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

Kwasnoski et al. teach a microtiter plate, wherein the microtiter plate may further comprise a cover.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to use the cover of Kwasnoski et al. with the microtiter plate of Provonchee because covers are routinely used in the art on microtiter plates to prevent loss of sample or contamination. In addition, it would have also been obvious to modify the dimensions of the

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modified device of Provonchee and Kwasnoski et al. to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

10. Claims 1-19, 22-25, 71-89, and 93-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cassin et al. (US Pat. 5,910,287). The reference teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. In addition, the reference teaches that the wells of the reference may be made in any cross-sectional shape, including square. The walls of the wells may be completely vertical or may be conical. The reference also teaches cycloolefins that may comprise part of a plate cover. However, the reference does not teach the specific dimensions of the device, such as size (height, length, width, angles).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to modify the dimensions of the device of Cassin et al. to the specific lengths, widths, and angle sizes required by the present claims. It would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

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11. Claims 1-20, 22-25, 71-90, and 92-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman et al. (US Pat. 4,596,723) in view of Kwasnoski et al. (US Pat. 6,423,948 B1).

Kaufman et al. teach an immunoassay, wherein antigen solutions are allowed to stand overnight in wells of polystyrene or polypropylene microtiter plates, permitting adsorption of protein to the well bottom and walls. Thereafter, the antigen solution is poured off, and the wells are filled with noninvolved protein, which cover all the remaining binding sites on the well not already bound by antigen protein. However, the reference does not teach the use of a cover, specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

Kwasnoski et al. teach a microtiter plate, wherein the microtiter plate may further comprise a cover.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to use the cover of Kwasnoski et al. with the microtiter plate of Kaufman et al. because covers are routinely used in the art on microtiter plates to prevent loss of sample or contamination. In addition, it would have also been obvious to modify the dimensions of the modified device of Kaufman et al. and Kwasnoski et al. to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular

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ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

Response to Arguments

12. Applicant's arguments filed 3/15/04 have been fully considered but they are not persuasive.

13. Applicant first argues that all the cited references only teach standard ninety-six well microtiter plates, which does not meet the newly added limitation in claim 1 of a wall extending from an area adjacent a top edge of the well to a top portion of the housing, wherein the at least one wall is at least partially sloped in an area thereof adjacent said well or a ledge extends from said edge to said at least one wall. This is not found convincing. The references cited above under 35 USC 103, either alone or in combination, teach a microtiter plate with a cover. When a standard microtiter plate cover is placed on the plate, it fits snugly over the plate, such that the area adjacent a top edge of the wells on the periphery of the microtiter plate meets/contacts the microtiter plate cover (top portion of the housing). Therefore, the area adjacent the top edge of the wells on the periphery of the microtiter plate in all the references contacts the microtiter plate cover or the top of the housing, and the wall is at least partially sloped in that it is vertical in contacting the cover, which is sufficient to meet these claim limitations.

14. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the

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applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

15. Applicant argues that the holding in *In re Rose* regarding changes in size is not applicable since the present invention involves more than just a change in size. This is not persuasive. In support of this conclusion, applicant has relied on the fact that none of the references teach elimination of wicking; however, the examiner maintains that such an explicit disclosure is not necessary as conventional microtiter plates, absent evidence to the contrary, are interpreted as inherently possessing this feature. One does not put liquid in the wells of a microtiter plate with the expectation that the liquid will not remain there; rather, one expects that liquid disposed in the well will stay there, which reduces the difference in applicant's invention over the prior art to a mere change in size of the components. Further, with the use of a cover, loss of sample through evaporation out of the device is minimized. Although the present invention may indeed possess various advantages over the prior art and produce unexpected results with regards to elimination or reduction of wicking, as applicant contends, to merit weight, as the examiner has advised on prior occasions (See Final Rejection mailed 7/2/03), applicant should consider filing a declaration with data outlining the advantages and unexpected results of the present invention over the prior art instead of a merely conclusory statements.

Conclusion

Claims 1-25 are rejected.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kartic Padmanabhan whose telephone number is 571-272-0825. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kartic Padmanabhan
Patent Examiner
Art Unit 1641



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06/01/04